

AN UNUSUAL NEW TIPHIID GENUS FROM PERU AND A KEY TO THE AMERICAN GENERA OF TIPHIINAE (HYMENOPTERA)

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Abstract.—A new genus and species of tiphid wasp in the subfamily Tiphinae, *Megatiphia fuscata*, is described, and an illustrated key to the tiphine genera of the Western Hemisphere is given, including: *Tiphia*, *Paratiphia*, *Mallochia*, *Krombeinia*, *Neotiphia*, *Epimodipteron* and *Megatiphia*.

Key Words.—Insecta, Tiphidae, Tiphinae, *Tiphia*, *Paratiphia*, *Mallochia*, *Krombeinia*, *Neotiphia*, *Epimodipteron*

Although tiphid wasps are large bodied and often colorful insects, they are inconsistently collected, perhaps due to considerable endemism and/or seasonality. The tiphid fauna of South America is particularly poorly known, especially in the oriente region. Although there have been a number of extensive collections of insects made in eastern Peru, few specimens have been made available for study. Material seen from this region indicates that there is a great deal of endemism on the Amazonian slopes of the Andes.

Members of the subfamily Tiphinae are characterized by features discussed by Kimsey (1991). These features include: the occasionally enlarged tegula, the mesosternum with a large generally flattened plate separating the mesopleural lamellae, females with the marginal cell open, and the midtibia with one spur.

There are seven genera of tiphines in the Western Hemisphere. Of these only *Tiphia*, *Mallochia*, *Epimodipteron* and *Megatiphia* (described here) occur in South America. *Mallochia* has only been recorded from Argentina and southern Brazil. The dominant tiphine genus in South America is *Tiphia*. Although Allen (1972) published a key to the tiphines of the Americas, his key is poorly illustrated, difficult to use and does not include *Megatiphia*. Therefore, a revised key is given below.

KEY TO THE WESTERN HEMISPHERE GENERA OF TIPHIINAE

1. Tergum I smooth, without transverse carina 2
- Tergum I with transverse carina submedially (Fig. 4) 4
- 2(1). Sternum I with small ventral hook or projection near base, hindtibia with small fovea subapically on inner surface (Fig. 9)
..... *Megatiphia*, NEW GENUS
- Sternum I without ventral hook or projection (Fig. 4), hindtibia without fovea on inner surface 3
- 3(2). Oral fossa plus lateral oral plate narrower than long (as in Fig. 3), male sternum V with small lateral denticle, male sternum VI apical margin notched, appearing trilobate (as in Fig. 8) *Mallochia* Allen
- Oral fossa plus lateral oral plate considerably wider than long (as in Fig.

- 2), male sternum V without lateral denticle, male sternum VI apical margin evenly curved without lateral notch *Tiphia* Fabr.
- 4(1). Tergum I with flat ovoid lateral patches (Fig. 4), male sternum VII, enlarged and cupping the apical tergum *Paratiphia* Sichel
- Tergum I without flat ovoid lateral patches, male sternum VII not enlarged or cupping the apical tergum (except in *Epomidiopteron*) 5
- 5(4). Propodeum without transverse carina isolating dorsal from posterior surface (Fig. 7), body with distinctive yellow markings (Fig. 7), forewing with 3 submarginal cells, tergum I broadly joined to II (Fig. 7), male sternum VII apical rim not laterally notched, expanded dorsally and cupping the apical tergum *Epomidiopteron* Romand
- Propodeum with transverse carina separating dorsal from posterior surface (as in Fig. 5), body without yellow markings, forewing with 1 or 2 submarginal cells, terga I and II constricted at their juncture, male sternum VII apical rim notched laterally, appearing almost trilobate (Fig. 8) 6
- 6(5). Terga II-V with broad, highly polished, asetose and translucent apical band (Fig. 8) *Neotiphia* Malloch
- Terga II-V without distinct apical band *Krombeinia* Pate

MEGATIPHIA, NEW GENUS
(Figs. 1, 2, 5, 6, 9, 10)

Type species.—*Megatiphia fuscata*, NEW SPECIES.

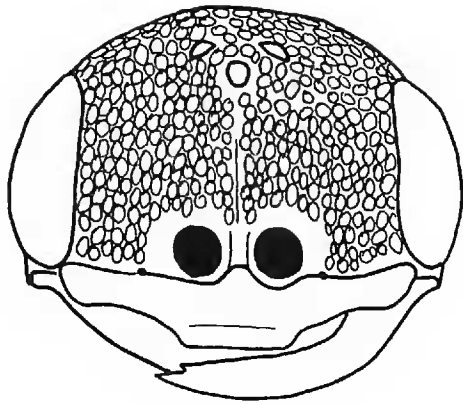
Female.—Oral fossa region delimited by carina, broader than long (Fig. 2); maxillary palpus with 6 articles; labial palpus with 4 articles; genal bridge bulging in lateral view (Fig. 10); pronotum with transverse carina well developed, extending downwards laterally (Fig. 10); mesopleuron with omaulus (Fig. 10); tegula subovoid, only slightly longer than broad, inner margin produced into a posterior angle; hindcoxa without dorsal carina; mesosternum bulging medially, with submedial lateral tooth (Fig. 6); forewing with 2 submarginal cells (Fig. 10); propodeum with transverse and vertical lateral carinae separating posterior propodeal surface (Fig. 5); midtibia without subapical fovea on inner surface; hindtibia with subapical elliptical fovea on inner surface (Fig. 9); gastral segments: tergum I without transverse carina or oval flat lateral patches; sternum I with subbasal projection; terga I and II strongly constricted at their juncture; terga II-V without discrete, polished apical band; sternum VI slightly emarginate apicomediaally.

Diagnosis.—See Key.

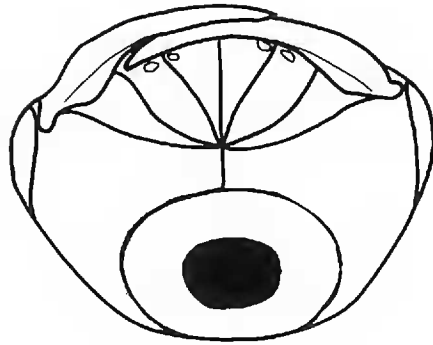
Discussion.—This genus is a rather extremely modified member of the subfamily Tiphinae, based on the broadly elevated mesosternum that separates the mesopleural lamellae, the flat antennal sockets, single midtibial spur, and marginal cell open in the female. *Megatiphia* appears to be most closely related to *Tiphia*, mostly based on the absence of characteristics found in *Paratiphia*, *Mallochia*, *Neotiphia* and *Krombeinia*, including the carinate first gastral tergum and tergal bands. Males of this genus probably lack a cupped or trilobate sternum VII, as do those of *Tiphia*. *Megatiphia* can be distinguished from *Tiphia* by the highly modified mesosternum, first gastral sternum with a projection, and the hindtibia with a subapical fovea.

Etymology.—*Mega*—large, *tiphe*—insect, Gr, f.

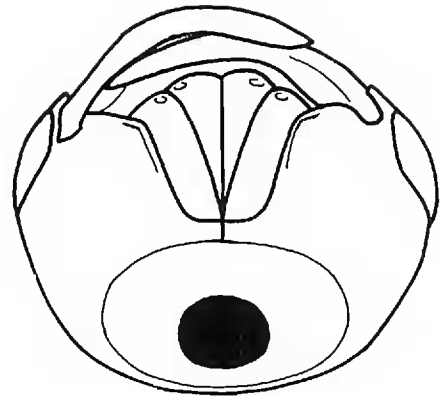
Material Examined.—See type species.



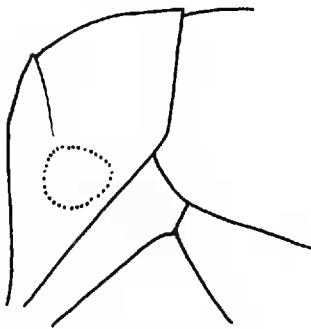
1. *Megatiphia*



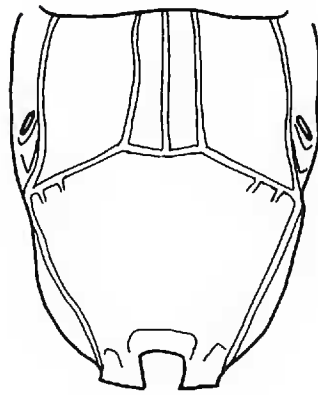
2. *Megatiphia*



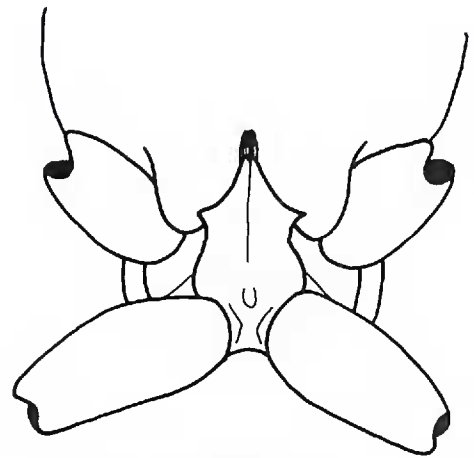
3. *Paratiphia*



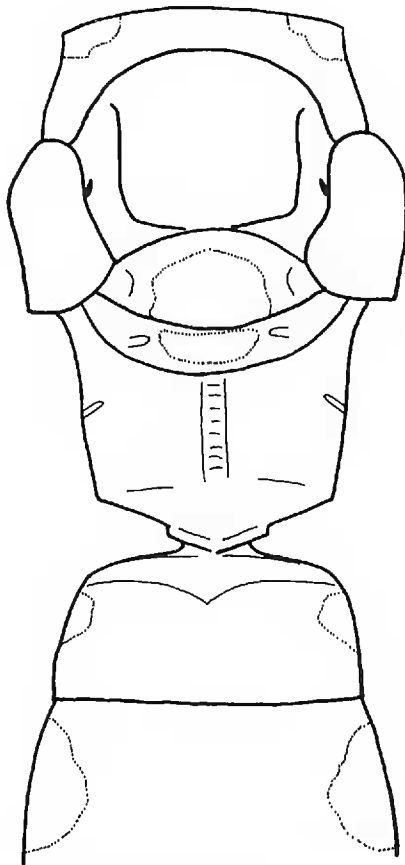
4. *Paratiphia*



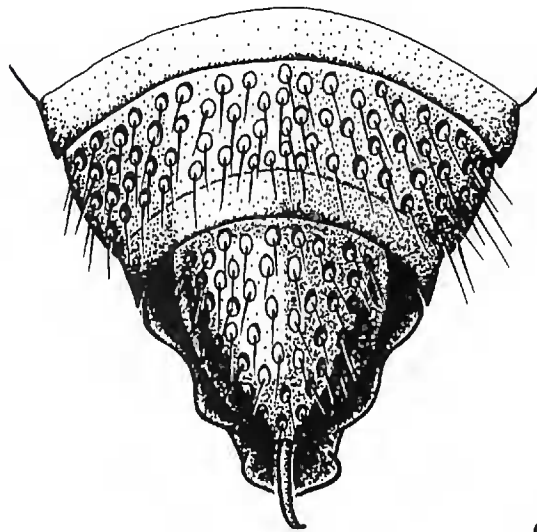
5. *Megatiphia*



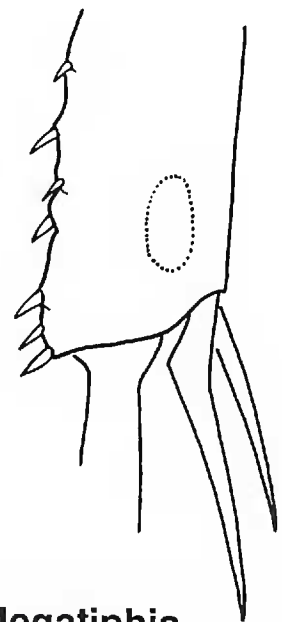
6. *Megatiphia*



7. *Epomidiopteron*



8. *Neotiphia*



9. *Megatiphia*

Figures 1-9. Figure 1. Front view of female face. Figures 2-3. Ventral view of head, females. Figure 4. Lateral view of basal abdominal segments, male. Figure 5. Posterior view of propodeum, female. Figure 6. Ventral view of mesothorax, female. Figure 7. Dorsal view of thorax and basal abdominal segments, with head and wings removed, female. Figure 8. Dorsal view of apical abdominal segments of male. Figure 9. Inner surface of apex of hindtibia of female. Figures 1, 2, 5, 6, 9. *Megatiphia fuscata*. Figure 3. *Paratiphia robusta* Cameron. Figure 4. *Paratiphia neomexicana* Cameron. Figure 7. *Epomidiopteron julii* Romand. Figure 8. *Neotiphia sulcata* Roberts.

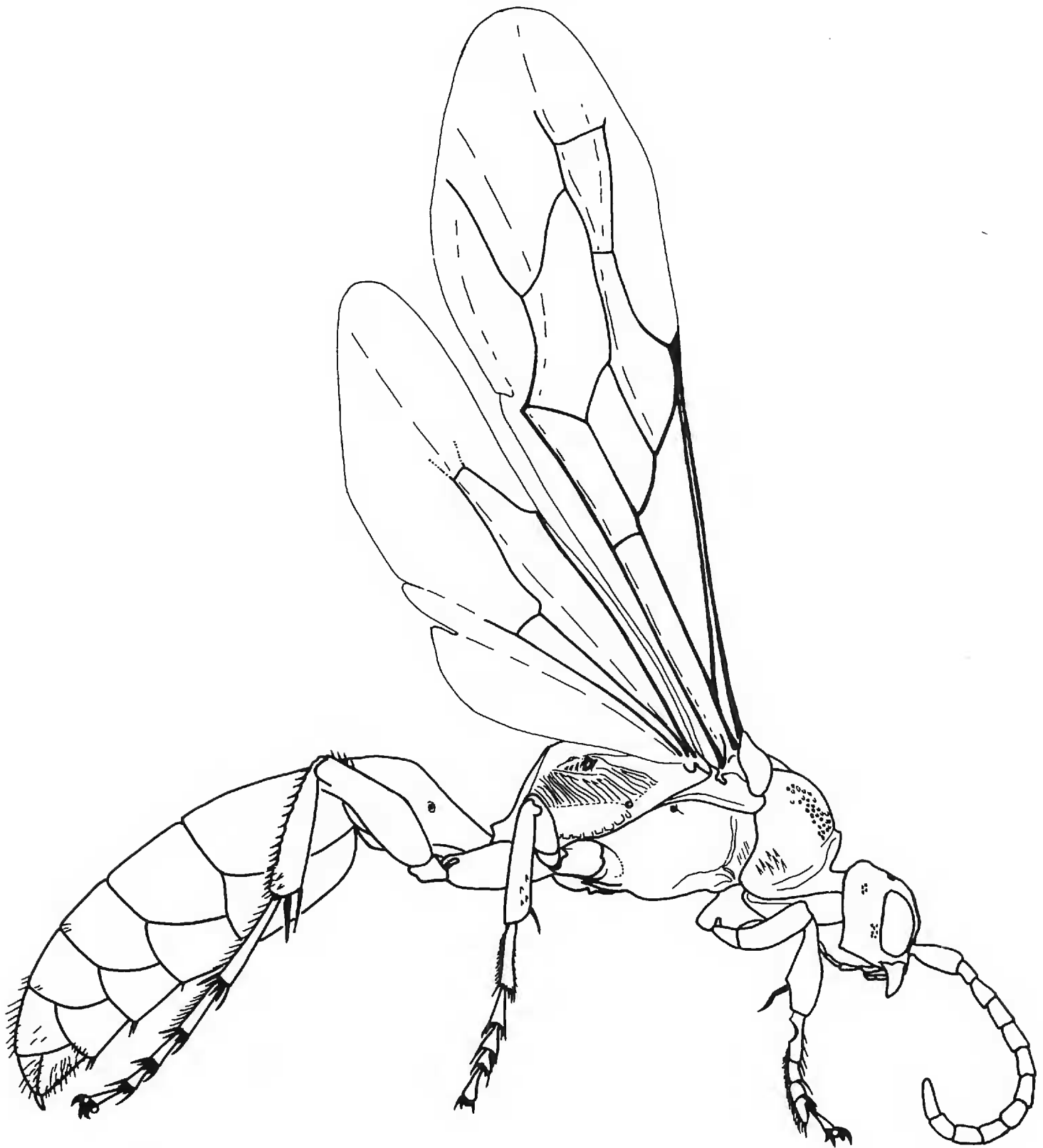


Figure 10. Lateral view of *Megatiphia fuscata*, female.

MEGATIPHIA FUSCATA, NEW SPECIES

Type.—Holotype female. PERU. JUNIN PROV.: Chanchamayo, 4 Mar 1949, J. Schunke. Holotype deposited in the U.S. National Museum, Washington, D.C. Paratype female: same data as holotype, except collected 31 Jan 1949 (U.S. National Museum).

Female.—(Holotype). Body length 27 mm; forewing 20 mm. Face (Fig. 1) broader than long with coarse contiguous punctures on frons, vertex and gena; clypeus broadly truncate, apex $4\times$ midocellus diameter (= MOD) wide; malar space 0.7 MOD long; subantennal distance 3 MOD long; labial palpi 4-segmented; maxillary palpi 6-segmented; body (Fig. 10); flagellomere I length $1.6\times$ breadth; flagellomere II $1.5\times$ as long as broad; mesopleuron with fine dense appressed silvery pubescence anteriorly before oaulus, medially with coarse contiguous punctures, with polished impunctate welt before scrobe, posteriorly below scrobe with nearly contiguous tiny punctures and appressed pubescence;

pronotum with sharp transverse and lateral anterior carina, notum polished anteriorly with large punctures 0.5–1 puncture diameter apart, posteriorly impunctate; scutum impunctate except medially with large punctures clumped posteromedially; scutellum polished and impunctate medially with large nearly contiguous punctures sublaterally; metanotum polished, nearly impunctate; propodeum shagreened and dull, with 3 parallel medial carinae, spiracle enclosed by 2 subparallel lateral carinae, posterior surface delimited by transverse dorsal and lateral carinae, laterally below spiracle with coarse crossridges; abdominal segments highly polished with sparse setae subapically, densest on apical sternum. Body slender, and shiny black; wings fuscous and nearly opaque.

Diagnosis.—Because this is the only species currently placed in *Megatiphia*, it is difficult to differentiate between generic and specific characters. The highly polished and nearly asetose black body and dark wings are distinctive features of this species, as are the short flagellomeres and impunctate abdominal segments.

Material Examined.—See types.

LITERATURE CITED

- Allen, H. W. 1972. A monographic study of the subfamily Tiphiinae of South America. *Smithsonian Contrib. Zool.*, 113.
Kimsey, L. S. 1991. Relationships among the tiphid wasp subfamilies. *Syst. Entomol.*, 16: 427–438.

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